

IN THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A virtual routing system, comprising:
a plurality of subscriber virtual routers , each subscriber virtual router comprising a router implemented in software executing on a software-configurable one or more of a plurality of available processors; each subscriber virtual router operating across one or more processing elements; and
a system virtual router, wherein the system virtual router comprises software executing on is mapped onto one or more processing elements, and wherein the system virtual router aggregates traffic from the subscriber virtual routers and transfers that traffic across the Internet.
2. (Previously Presented) The virtual routing system according to claim 1, wherein at least one of the subscriber virtual routers operates across two or more processing elements.
3. (Previously Presented) The virtual routing system according to claim 1, wherein at least one of the subscriber virtual routers implements a virtual private network (VPN).
4. (Previously Presented) The virtual routing system according to claim 1, wherein at least one of the subscriber virtual routers includes a virtual interface (VI) and a virtual network connection (VNC), wherein the virtual interface defines a subscriber's connection to another virtual router and wherein the virtual network connection describes parameters of the connection defined by the VI.
5. (Previously Presented) The virtual routing system according to claim 1, wherein at least one of the subscriber virtual routers includes a virtual interface (VI), wherein the virtual interface defines a subscriber's connection to another subscriber virtual router, wherein the virtual interface is configured to define possible services for packet flows passing through the virtual interface.

6. (Previously Presented) The virtual routing system according to claim 1, wherein at least one of the subscriber virtual routers includes a virtual interface (VI), wherein the virtual interface defines handling of packet flows relating to the subscriber's connection.

7. (Currently Amended) In a routing system having a plurality of processing elements, a method of implementing network services for a plurality of subscribers, including a first and a second subscriber, the method comprising:

defining a system virtual router, comprising software executing on one or more processors;

defining a first and a second subscriber virtual router, wherein each of the first and second virtual routers comprise a router implemented in software executing on a software-configurable one or more of a plurality of available processors;

associating the first virtual router with the first subscriber;
associating the second subscriber virtual router with the second subscriber;
mapping each of the virtual routers to one or more of the plurality of processing elements;
defining connections for each subscriber virtual router; and
selectively transferring packets from each subscriber virtual router to the system virtual router.

8. (Previously Presented) The method according to claim 7, wherein selectively transferring includes examining each packet to determine packets to be transferred outside of the routing system and transferring to the system virtual router those packets that are to be transferred outside of the routing system.

9. (Previously Presented) The method according to claim 7, wherein mapping each of the virtual routers includes mapping the first and second subscriber virtual routers to the same processing element.